

To err was fatal

Carlo Fonseka

Error free patient care is the ideal standard but in reality unattainable. I am conscious of having made five fatal errors during the past 36 years.

After two years in state hospitals I joined the staff of my medical school in Colombo in 1962, holding the posts of lecturer, senior lecturer, associate professor, and professor of physiology. In all that time I have practised medicine because I believe that direct contact with patients makes my teaching more relevant.

In recounting the stories of my fatal errors the problem of guarding patient confidentiality arises. The *BMJ* has changed its policy from guarding anonymity to getting consent.¹ In the most recent three of my five fatal errors, obtaining informed consent from relatives was easy. With regard to the first error, which occurred in 1960, and the second which occurred well over a quarter of a century ago, relatives could not be tracked down. So trying to achieve anonymity by changing names and some of the details was the best I could do. The *British Medical Journal* is not only British, it is also truly international. Wouldn't it be guilty of a species of ethical imperialism—the opposite of cultural relativism—if it refused to publish material about patients dead for nearly three decades or more, merely because written consent for publication had not been obtained from relatives who cannot be traced?

I find myself paralysed by doubts about how best to recount the case histories. It was Hippocrates who reputedly introduced the case history to medicine. The idea that diseases have a natural history is traceable to him.² It is, of course, possible to recount the history of an illness without revealing much about the sufferer. To do so would not serve the purpose of this paper.

First fatal error

The 23 year old labourer Gunapala looked like a prize fighter. He walked into the professorial medical ward of the Colombo Medical School around 11 o'clock one morning in 1960, accompanied by his mother. His mother, a buxom, working class woman in her 40s, gave the history. Gunapala had been discharged

from another medical ward in the hospital the previous day with the assurance that he had no disease which required treatment. The visiting physician in charge of that ward was perhaps the astutest diagnostician among my clinical teachers. The assurance might well have been given by an intern.

The mother said that she was sure something was seriously wrong with her son because he continued to complain of a tight feeling in his upper abdomen and had difficulty in breathing. "Look," I told her, "your son was discharged from this hospital yesterday; today you bring him walking to this already overcrowded ward. All the patients on beds in this ward are too ill even to walk. Are you asking me to transfer one of them to the floor and give his bed to your son?"

I examined the patient cursorily, perhaps even carelessly. The trouble was that my mind was already firmly made up. My tentative diagnosis was diaphragmatic pleurisy. I prescribed penicillin, aspirin, and an antiphlogistic plaster to the upper abdomen.

When I came on my night round the night nurse told me that I should review Gunapala. She had given him a hospital trolley to sleep on, she said, because he looked ill. I told her that I knew better than she did, which patients required close monitoring and which ones did not.

About four hours later the nurse telephoned me to say that Gunapala was having fits. By then the diagnosis was obvious: a full blown case of tetanus. At the mandatory inquest the coroner, a layman, asked me whether the patient had given a history of a penetrating wound on the sole of a foot, caused by a rusty nail. Without batting an eyelid, I said "No," although the truth was that I never asked. The coroner then judged that without such a history no doctor could reasonably be expected to diagnose tetanus.

The most harrowing memory of the inquest was my encounter with Gunapala's grieving mother. She looked straight into my eyes and said: "Sir, you said you would send my son home on the next day. What you sent me instead was a thunderbolt." I managed to mumble that none of the several doctors who had seen her son realised that he was suffering from tetanus until it was too late. "Is that so?" she asked. "Must be because of his 'karma'; I thought doctors knew everything about all the diseases in the world."

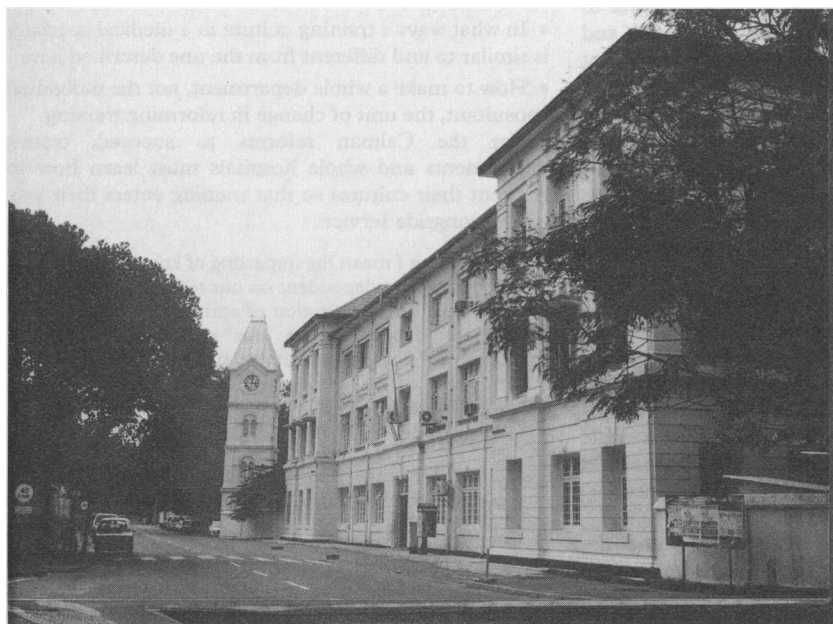
I think that I never came to terms with Gunapala's death. I suspect that his death must have been a strong influence that subconsciously drove me out of clinical medicine into a preclinical department like physiology, where in those days you killed only frogs.

Second fatal error

Miss C, a petite, shy girl in her late teens and her lean boyfriend were students of mine in a class of paramedics in the 1970s. One day they came to see me. She had not had her periods for two months. The boy swore that the girl was still a virgin. There were early symptoms and signs of pregnancy and a urine pregnancy test was positive. A week later it was positive again. The boy told me that they had decided to end the pregnancy or to end their lives. I asked what the problem was. After all, they loved each other and were going to marry sooner or later. The boy replied that their course would end only eight months hence and that they simply could not marry then and go through with the pregnancy. The girl

University of Kelaniya,
Ragama, Sri Lanka
Carlo Fonseka, professor of
physiology

BMJ 1996;313:1640-2



Colombo Medical School, which was founded in 1870

said that she was certain that her stern father would throw her out if he got to know the truth.

With her permission I visited her home and tried to persuade her mother to take a sympathetic view of the matter. She, however, only confirmed her daughter's worst fears: "Her father would kill her," she said categorically. I invited the couple to come to our home and talk things over with my wife. I hinted that it might be possible to take the girl into our home and see her through the pregnancy. The girl never came. The boy came again and again and implored me to arrange a termination. At that time there was no obstetrician who would have done a life saving therapeutic abortion on psychiatric grounds at my request. The boy told me that there was a senior nurse in the abortion business who, for a price, would initiate the process and send the patient to hospital. These desperate young people entreated me to introduce them to that nurse. I had grave misgivings. In a final attempt to ward them off I told them that I would agree to consider their request if they got married. Within a couple of days they fulfilled that condition too. I then sent them to the nurse. The girl died of septic peritonitis a few days later.

I feel directly responsible for this girl's death. Has it ultimately to do with my ethical belief that every woman has a right to control her body and that termination of a pregnancy in the first few weeks after conception is a lesser evil than permitting the birth of an unwanted child into our already overcrowded planet? Or did I become guilty of this error because I live in a society which provides safe abortions to those who can pay for them and septic abortions to those who cannot?

Third fatal error

Mrs H, a woman in her mid-30s, was the wife of a friend of a friend of mine. Her husband, a minor official



The film star Vijaya Kumaratunga, whose assassination in 1988 triggered one fatal error

in a state corporation, used to seek medical advice from me. One day, in the mid-1970s, he brought his wife to the physiology department in the Colombo Medical School. To reach the department you have to climb two flights of stairs—a total of 64 steps. Based on hundreds of casual observations, I had calculated that if a person could climb up to the department at a normal pace and not become breathless there was nothing seriously wrong with that person's heart, lungs, or blood. On the day Mrs H walked in, complaining of becoming unduly breathless on mild exertion, I asked her whether she felt breathless after climbing the 64 steps. When she said "No" I didn't bother to examine her. I placed my fingers perfunctorily on her radial pulse and assured her that there could not be anything seriously wrong with her. I did not even bother to place my stethoscope on her heart. Had I done so I believe that she would not have died three weeks later of pulmonary oedema complicating mitral stenosis. What was my error in this case? It certainly wasn't ignorance; it wasn't that I didn't care enough. Her husband continues to seek medical advice from me. He told me that he was sure that if I had seen his wife when she got her terminal attack of pulmonary oedema I would have saved her.

Fourth fatal error

Asura was an intelligent boy of 16, president of the science society in his school, the only son of an old acquaintance. Ever since he had heard me lecture to his society on scientific firewalking he had believed that I was the greatest philosopher of science in Sri Lanka. Poor lad, he had to pay with his life for that belief. He had been admitted to the neurosurgical unit at the teaching hospital for ligation of a berry aneurysm in his Circle of Willis. But he had refused to give his consent for the operation unless he was advised to do so by me. I did so, using the tricks of demagoguery, not the canons of scientific rationality. At the end of my harangue on the marvels of modern science he readily gave his—there is no other word for it—misinformed consent. Two days later he died of a surgical misadventure on the operating table.

Fifth fatal error

Amarasiri Jayasinghe (Podi Amare), 34, was a man from my village. He became passionately devoted to Vijaya Kumaratunga, film idol, pop star, and charismatic politician, and was one of his trusted henchmen. After Vijaya Kumaratunga was assassinated on 16 February 1988 Podi Amare became depressed and declared that life without Vijaya Kumaratunga was not worth living. On 21 February, when Vijaya Kumaratunga's body was lying in the art gallery for public obeisance, some of Podi Amare's friends brought him to me because he had been threatening to commit suicide. The time was around 8 pm. It didn't take me long to diagnose that he had acute reactive depression with a strong suicidal tendency. I told his friends that there was a high probability that Podi Amare would kill himself and that the correct emergency treatment for him was to admit him to hospital for continuous observation. I asked the friends to keep him under observation for the next two hours until I was free to take him to the teaching hospital. They agreed to do so, but I noticed that some of them were in various stages of inebriation. One of them tried to call what he mistakenly believed to be Podi Amare's bluff and challenged him to translate his suicidal threat into action. Around 10 pm Podi Amare daubed himself with petrol and set himself ablaze. Onlookers quickly put out the flames but not before Podi Amare had sustained severe burns. He was admitted to hospital and when I visited him two days later he beseeched me to save his life. But

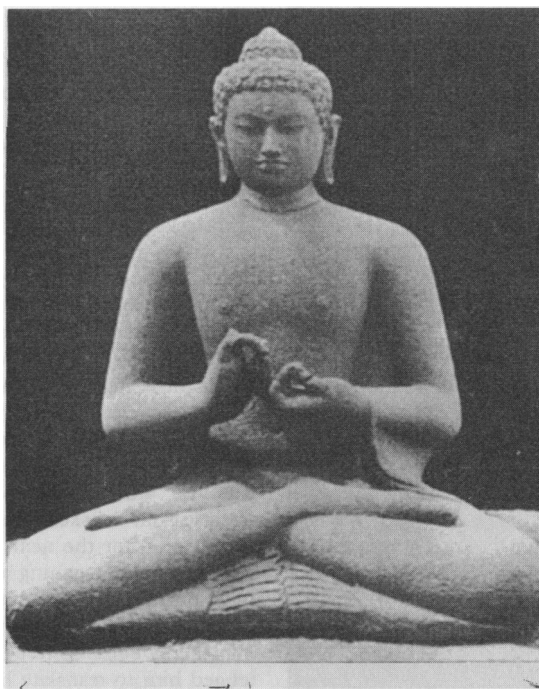
he died a few days later. I believe that Podi Amare died because I erred. For various reasons, I unpardonably delayed his admission to hospital.

Synopsis and self appraisal

Why are humans prone to error? The science of error prevention addresses that matter. According to one model, there are three levels of human performance: skill based, rule based, and knowledge based.³ Corresponding to these three levels of performance, three types of error have been identified: skill based, rule based, and knowledge based. Certain physiological, psychological, and environmental factors have been identified which predispose to errors. Fatigue, sleep loss, alcohol intake, boredom, anxiety, heat, and noise are examples.

Although the above classification of errors is perhaps too schematic to be quite true, it can be deployed for a preliminary analysis of my five fatal errors. Were they skill based, rule based, or knowledge based? I was certainly not ignorant about tetanus, which killed the first patient. I knew full well about the risks of backstreet abortions, which killed the second patient. The auscultatory signs of mitral stenosis reverberate in my memory even now and yet I failed to diagnose mitral stenosis, which killed the third patient. I know of the limitations of science more than most doctors of my time, but I brainwashed a boy to consent to an operation which killed him. And I was absolutely aware of the emergency treatment of a patient who is a high suicide risk, but I failed to apply that knowledge in the case of the fifth patient. Therefore, my fatal errors were not knowledge based ones.

Nor were they skill based ones in the sense that they were "slips" which occurred in an unguarded moment of diverted attention. By exclusion, therefore, they have to be rule based errors. The educational task now is to identify precisely the rule that was fatally violated in each case.



The Buddha offered a comprehensive analysis of the sources of intellectual error in the sixth century BC

Key messages

- All doctors are fallible
- The natural reaction of doctors to errors is to hide them or to rationalise them away
- It is unscientific and unethical to refuse to face our errors
- There is no cathartic ritual in our profession to expiate the sense of guilt generated by our errors
- Since knowledge grows mainly by error recognition, facing our errors squarely is the path to medical wisdom

The thought processes required for arriving at a diagnosis and for decision making that goes with treatment are governed by rules. Indeed all rational activity is subject to rules and even the rules of formal logic are abstracted from those governing effective day to day living.⁴ Therefore, it is reasonable to analyse even medical errors by the rules which govern rational day to day life.

In the case of Gunapala and Mrs H, I ignored the rule which enjoins me not to jump to conclusions. In the case of Podi Amare I violated the rule which enjoins me to treat an emergency as an emergency. In the case of Miss C, I erred because I condoned an inherently high risk procedure. In the case of Asura, I erred because I deployed dishonest techniques of persuasion in the belief that sometimes the end justifies the means.

Further reflection generates the thought that in the first case I jumped to the wrong conclusion because of my excessive reverence for a teacher. In the second case I condoned the risky venture because there was a "seeming possibility" of getting away with it. In the third case I jumped to the wrong conclusion because I acted merely by "considering appearances." In the fourth case I brainwashed the boy because I had too much faith in the tradition of scientific medicine. In the final case the root cause of my error was my speculation that the emergency could survive a delay of a couple of hours.

In the sixth century BC there lived in north India a teacher—reverentially called the Buddha—who by sheer force of mind had apprehended precisely and comprehensively the possible sources of intellectual error. Teaching the Kalamas how to avoid error he said: "Now, look you Kalamas, do not be led by reports, or tradition or hearsay. Be not led by the authority of religious texts, nor by mere logic or inference, nor by considering appearances, nor by the delight in speculative opinions, nor by seeming possibilities, nor by the idea: 'this is our teacher.'"⁵ This analysis touches the root causes of my fatal errors more insightfully than any other scheme of error analysis that I know.

When all is said and done a gibe at my expense must be anticipated. Although Alexander Pope did indeed famously preach that, "To err is human, to forgive divine," it will be murmured that only a fool will err fatally five times in 36 years. So the prospect must be squarely faced: this paper may embody nothing more or less than the confessions of a fool. If, however, by confessing to the world a fool could help to promote ever so slightly the ideal of error free patient care I believe that the fool has a scientific and ethical duty to confess.

- 1 Smith R. Publishing information about patients. *BMJ* 1995;311:1240-1.
- 2 Sacks O. *The man who mistook his wife for a hat*. London: Pan Books, 1986.
- 3 Rasmussen J, Jensen A. Mental procedures in real life tasks: a case study of electronic trouble-shooting. *Ergonomics* 1974;17:293-307.
- 4 Slaney JK. Formal logic and its applications in medicine. In: Phillips C, ed. *Logic in medicine*. London: BMJ Publishing Group, 1988:17-32.
- 5 Rahula W. *What the Buddha taught*. London: Fraser Gallery, 1959.